

# RECEIVED



June 21, 2017

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Joseph Laydon Town Planner

Grafton Municipal Cente**PLANNING BOARD**30 Providence Road GRAFTON, MA

Grafton, MA 01519

Maria Mast Conservation Agent Grafton Municipal Center 30 Providence Road Grafton, MA 01519 T 508-856-0321 F 508-856-0357 gravesengineering com

Subject:

**Proposed Registered Marijuana Facility** 

**8 Millennium Drive** 

Special Permit, Site Plan, Stormwater Regulations and Wetland

**Regulations Review** 

#### Dear Joe and Maria:

We received the following documents on May 12, 2017:

- Bound document entitled <u>Application for Special Permit and Site Plan Approval</u> dated May 10, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc.
- Document entitled <u>Notice of Intent for 8 Millennium Drive</u> dated May 25, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc.
- Plans entitled <u>8 Millennium Drive</u>, <u>Site Plan in the Town of Grafton</u>, <u>Massachusetts</u> dated May 8, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc. (12 sheets)
- Bound document entitled <u>Stormwater Management Report, Proposed Registered Marijuana Dispensary, 8 Millennium Drive, Grafton, Massachusetts</u> dated May 8, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through October 17, 2016; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices on behalf of the Planning Board. GEI has also been requested to review and comment on the documents' conformance with applicable Conservation Commission "Regulations Governing Stormwater Management" dated May 2013 and "Regulations for the Administration of the Wetlands By-Law" dated May 2014 on behalf of the Conservation Commission. As part of this review GEI visited the site entrance on June 21, 2017.

### Our comments follow:

### **Zoning By-Law**

 A proposed dumpster pad was not shown on the plans. The Board may wish to inquire of the applicant if a dumpster is to be used or if trash will be stored within the building. (§1.3.3.3.d.24)

- 2. The plans don't identify the height of the chain link fence that is proposed to surround the developed area of the site. (§1.3.3.3.d.27)
- A waiver has been requested from sign regulation §4.4.3.4.4 regarding sign area. We understand the Planning Board will address waiver requests.

# **Grafton's Regulations Governing Stormwater Management**

- 4. A cost estimate for the stormwater system and a timeline for construction were not included in the submittal. (§7.A)
- 5. A limit of work line needs to be shown on the Erosion Control Plan (Sheet 7) to define the limits of clearing and the limits of work in areas where erosion control barriers were not proposed (e.g. where erosion barriers would be upslope of work limits). (§7.B.2.b)
- The on-site locations to be used for storage of materials during construction and postconstruction snow storage need to be shown on the Erosion Control Plan (Sheet 7). (§7.B.2.f)

# Regulations for the Administration of the Wetlands By-Law

- 7. A site-specific phasing or sequencing plan must be submitted for any project disturbing three or more acres. The project will disturb approximately 5.8 acres. (§V.B.5.(f))
- 8. A waiver was requested to exclude fencing of the stormwater basin. We understand the Conservation Commission will address waiver requests. (§V.B.5.(h).3)
- 9. The forebay appears to be undersized; GEI estimated that the forebay volume is approximately 33% of the required volume. A minimum volume of 0.1 inch times the tributary area is required. Also, supporting calculations need to be provided to demonstrate compliance. (§V.B.5.(h).6)

### Hydrology & MassDEP Stormwater Management Review

- 10. GEI reviewed the hydrology computations and found them to be in order except as noted in the following comment. The hydrology computations accounted for the future building addition and associated ground cover.
- 11. Reach S1: Swale 1 was modeled with an invert of 406.00 but the plans showed 404.5 (HDWL 1 invert). Additionally, Reach S3: Swale 3 was modeled with an invert of 404.00 but the plans showed 400.4 (HDWL 3 invert).
- 12. For any future submittals, the text on the Drainage Areas plans must be legible. Text for the topographic contours was difficult to read, but we were able to perform a review of the hydrology calculations.
- 13. Compliance with the MassDEP Stormwater Standards and Handbook is reasonable except as noted in the following six comments.

- 14. We are concerned that the sand filter may not receive stormwater during small storm events. Sheet 4 shows a gabion wall to create the forebay's impoundment. A gabion wall consists of porous stone and the bottom of the gabion wall (elevation 394 feet) is two feet lower than the riser pipe's invert elevation (396.0 feet). During small storm events, stormwater will pass through the gabion wall instead of flowing through the sand filter. Similarly, on Sheet 10 the Sediment Forebay construction detail needs to clarify the type of materials to be used to construct the wall; the construction detail shows "concrete blocks or gabions".
- 15. At the stormwater basin, there will only be 0.45 feet of freeboard as measured between the peak 100-year water surface and the top of the berm. At least 1.0 feet of freeboard needs to be provided.
- 16. The top of the gabion wall that separates the forebay from the main stormwater basin was proposed at the same height as the basin's berm. The gabion wall needs to be sufficiently lower than the berm so that if the gabion wall is overtopped, stormwater will flow into the main basin instead of to the nearby wetlands.
- 17. The long-term Operation and Maintenance Plan (Standard 9) needs to address operation and maintenance of the sand filter.
- 18. The Erosion Control Barrier (ECB) detail on Sheet 7 shows staked straw wattles with and without silt fencing. It is unclear on the plans where the straw wattles will or will not include silt fence; the plans must be revised to clearly show where each type of erosion control barrier is proposed.
- 19. The locations of a stabilized construction entrance and material stockpile area(s) need to be shown on the Erosion Control Plan (Sheet 7).

#### General Engineering

- 20. The plans don't propose radii at the driveway entrance and bituminous berm is proposed on only one side of the driveway entrance. The driveway must have vertical granite curb of sufficient radii to tie into the existing Millennium Drive vertical granite curb. Whereas the driveway on the abutting land of Primary Colors is proximate to the proposed driveway, it would be prudent for the plans to also show the curb radii at the Primary Colors' driveway entrance.
- 21. For the benefit of the contractor, a construction detail needs to be provided for the riser that will divert stormwater to the sand filter. Sheet 4 includes a pipe invert elevation for the riser but no other riser information was provided.
- 22. A construction detail (e.g. signs, pavement markings) for the handicap-accessible parking spaces was not provided on the plans. Additionally, the plans did not show the locations of the accessible parking space signs.
- 23. On Sheet 4, the riprap in Swale 2 needs to be extended northerly approximately 30 feet to protect the swale's side slope located across from the 24" pipe that discharges from headwall HDWL 4 into Swale 2.

- 24. The topographic contours in Swale 3 up-gradient of headwall HDWL 3 need to be re-evaluated and likely revised. There is a proposed 406 contour approximately 135 feet up-gradient of HDWL 3 and the HDWL invert elevation is 400.40. There is only one proposed contour between the headwall and the 406 contour, but two contours should be present.
- 25. The narrative for MassDEP Stormwater Standard 10 (Illicit Discharges) references piping for the proposed roof drains and the architectural plans show roof gutters. If piping for the gutters is to discharge into the swales, then the pipes need to be shown on the plans along with pertinent information (e.g. pipe size, material, elevations, slopes and erosion protection at the discharge end).
- 26. Pipe size, slope and length were missing on the plans for the drain pipe between the sand filter outlet and HDWL 5 and between the forebay outlet and sand filter.
- 27. No lighting was proposed to the south of the building or within/around the parking area to the north of the building. Whereas the dispensary will be open after sundown in the winter months, lighting should be provided in the northern parking area. Also, the Planning Board may also wish to inquire if lighting is proposed around the building for security purposes.
- 28. Whereas the grass swales will be in service immediately after their construction, turf matting needs to be place on the bottom and interior side slopes of the swales to prevent erosion while the grass is maturing.

### **General Comments**

- 29. The sand filter construction detail on Sheet 10 shows elevations in the 90's that should read in the 390's.
- 30. GEI has not reviewed the plans with respect to the proposed water and sewer utilities. We understand that the Grafton Water District and the Grafton Sewer Department will review the proposed water and sewer utilities.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,

Grayes Engineering, Inc.

Jeffey M. Walsh, P.E.

Vice President

cc: Eric Bazzett, P.E.; Heritage Design Group